

Appln No. 09/928,108  
 Amdt. Dated March 22, 2006  
 Response to Office Action of January 25, 2006

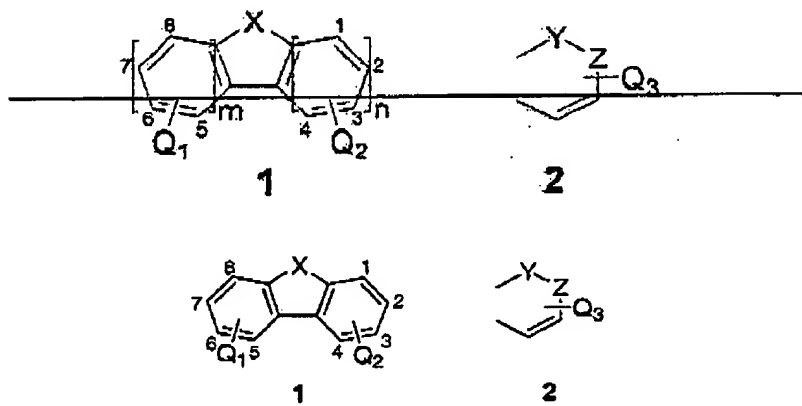
3

### Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

1. (Currently Amended) An infrared dye wherein the dye comprises a molecule of the formula 1



wherein ~~m and n are the number of fused 6-membered aromatic rings connected to each side of the central moiety such that the first 6-membered aromatic ring, if present, is connected as shown in 1;~~ and

wherein Q<sub>1</sub> and Q<sub>2</sub> are one of the same or different fused rings shown as 2 whereby one ring shown as 2 is connected at any of the two adjoining positions C<sub>1</sub> to C<sub>4</sub> at any orientation and another ring shown as 2 is connected to any of the two adjoining positions C<sub>5</sub> to C<sub>8</sub> at any orientation of the outer aromatic rings shown in 1 which may also include one or many substituents individually selected from the group consisting of R<sub>1</sub>, a fused 5-membered ring or a 6-membered aromatic ring optionally substituted with 1 to 4 substituents individually selected from R<sub>2</sub>, and fused polyaromatic rings optionally substituted with one or more substituents selected from R<sub>3</sub> wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are individually selected from the group R; and

wherein X is selected from the group consisting of CO, O and S; and

wherein Y is individually selected from the group consisting of CO, O, and S, and Z is selected from CR<sub>8</sub> or N where R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> which may be the same or different, are selected from the group R; and

wherein Z is individually selected from the group consisting of CO, O, and S, and Y is selected from CR<sub>11</sub> or N where R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> which may be the same or different, are selected from the group R; and

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4

$Q_3$  -may be 0, 1 or more than 1 substituents that are individually selected from the group consisting of  $R_{12}$ , a fused 5-membered ring or a 6-membered aromatic ring optionally substituted with 1 to 4 substituents individually selected from  $R_{13}$ , and fused polyaromatic rings optionally substituted with one or more substituents selected from  $R_{14}$  wherein  $R_{12}$ ,  $R_{13}$  and  $R_{14}$  are individually selected from the group R; and

R is the group consisting of a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted aralkyl group, a halide atom, a hydroxy group, a substituted or unsubstituted amine group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted thioalkyl group;

wherein the infrared dye absorbs strongly in the near infrared region of the spectrum but poorly in the visible region of the spectrum.

2. (Original) An infrared dye composition comprising a molecule that can be described according to claim 1.
3. (Currently Amended) An infrared absorbing dye composition comprising a molecule ~~in accordance~~ to claim 1 wherein the molecule is substituted with one or more bulky substituents, ~~are utilized~~.
4. (Currently Amended) An infrared absorbing ~~compound molecule~~ according to claim 1 wherein the molecule is substituted with one or more polar groups ~~substituents such as~~  $SO_3H$ ,  $NH_2$  and  $CN$  ~~are utilized~~.
5. (Original) A solvent-based ink composition comprising a molecule that can be described according to claim 1.
6. (Previously Presented) A solvent-based ink according to claim 5 which is ink jet printer ink.
7. (New) An infrared absorbing molecule according to claim 4, wherein the one or more polar groups are selected from  $-SO_3H$ ,  $-NH_2$  and  $-CN$ .